

Notice of Allowability

Application No.

10/063,803

Examiner

William C. Choi

Applicant(s)

HONEYMAN ET AL.

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 5/10/2004.
2. ☒ The allowed claim(s) is/are 1-44,46-69 and 71-106.
3. ☒ The drawings filed on 15 May 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 0103,0203,0504
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 0704.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David Cole on July 15, 2004.

The application has been amended as follows:

1. Claim 42, line 2, between "having" and "a", insert --from about 4 to about 15 percent by weight of the pigment of--.
2. Cancel claim 45.
3. Claim 46, line 1, delete "45" and insert therein --42--.

CLEAN VERSION OF AMENDED CLAIMS

Claim 42. An electrophoretic medium comprising a plurality of pigment particles suspended in a suspending fluid, the pigment particles having from about 4 to about 15 percent by weight of the pigment of a polymer chemically bonded to, or cross-linked around, the pigment particles, the polymer comprising a main chain and a plurality of side chains extending from the main chain, each of the side chains comprising at least about four carbon atoms.

Claim 46. An electrophoretic medium according to claim 42 wherein the particles have from about 6 to 15 percent by weight of the pigment of the polymer chemically bonded to the pigment particles.

Allowed Claims: 1-44, 46-69 and 71-106.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103.

Specifically, with respect to independent claim 1, none of the prior art alone or in combination disclose or teach of an electrophoretic medium comprising a plurality of pigment particles suspended in a suspending fluid as claimed, specifically wherein the pigment particles have about from 1 to about 15 percent by weight of a polymer chemically bonded to, or cross-linked around, the pigment particles.

Specifically, with respect to independent claim 32, none of the prior art alone or in combination disclose or teach of an electrophoretic medium comprising a plurality of carbon black particles suspended in a suspending fluid as claimed, specifically wherein the particles have about from 1 to about 25 percent by weight of the carbon black of a polymer chemically bonded to, or cross-linked around, the carbon black particles.

Specifically, with respect to independent claim 42, none of the prior art alone or in combination disclose or teach of an electrophoretic medium comprising a plurality of pigment particles suspended in a suspending fluid and a polymer comprising a main chain and a plurality of side chains extending from the main chain, each of the side chains comprising at least about four carbon atoms as claimed, specifically wherein the

pigment particles having from about 4 to about 15 percent by weight of the pigment of a polymer chemically bonded to, or cross-linked around, the pigment particles.

Specifically, with respect to independent claim 69, none of the prior art alone or in combination disclose or teach of a two-phase electrophoretic medium comprising a continuous phase and a discontinuous phase comprising a plurality of droplets, each comprising a suspending fluid and at least one pigment particle disposed within the suspending fluid as claimed, specifically wherein the discontinuous phase comprises at least about 40 percent by volume of the electrophoretic medium.

Specifically, with respect to independent claim 101, none of the prior art alone or in combination disclose or teach of a pigment particle for use in an electrophoretic medium having a polymer chemically bonded to, or cross-linked around, the pigment particle, specifically wherein the pigment particle has a charged or chargeable group bonded to the pigment particle separately from the polymer.

CITATION OF PERTINENT PRIOR ART

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Podszun et al (U.S. 4,639,403) is being cited herein to show an electrophoretic medium comprising some of the structural limitations of that of the claimed invention, but does not specifically disclose the claimed range of concentration.


CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Choi whose telephone number is (571) 272-2324. The examiner can normally be reached on Monday-Friday from about 9:00 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

W.C.
William Choi
Patent Examiner
Art Unit 2873
July 15, 2004


Scott J. Sugarman
Primary Examiner